BOOK REVIEWS

THE WESTERN JOURNAL OF MEDICINE does not review all books sent to it by the publishers. A list of new books received is carried in the Advertising Section.

MGH TEXTBOOK OF EMERGENCY MEDICINE—Emergency Care as Practiced at the Massachusetts General Hospital—Editor: Earle W. Wilkins, Jr, MD, Associate Professor of Surgery, Harvard Medical School; Chief of Emergency Services and Visiting Surgeon, Massachusetts General Hospital; Associate Editors; James J. Dineen, MD, Assistant Professor of Medicine, Harvard Medical School; Associate Physician, Massachusetts General Hospital; and Ashby C. Moncure, MD, Assistant Clinical Professor of Surgery, Harvard Medical School; Associate Visiting Surgeon, Massachusetts General Hospital. The Williams & Wilkins Company, 428 E. Preston Street, Baltimore, MD (21202), 1978. 804 pages, with 308 illustrations, $59.95.

Emergency medicine has developed over the past decade reflecting sophisticated technologic achievements in American medicine and the public's awareness of these advances. The growth in this field also reflects changing patterns of medical practice with an emphasis on increasing specialization and less availability of around-the-clock medical services from physicians in practice. Funding of emergency medical services systems by the federal government has contributed a new area of responsibility to this developing area of medicine. Training programs, including both residencies and fellowships, are now available to those who wish to make emergency medicine their careers.

Although comprehensive reference textbooks in emergency medicine have been published abroad for a number of years, these texts have generally not met the needs of emergency physicians in the United States. Emergency medicine books in this country have largely assumed the form of practical handbooks and of monographs covering certain specific areas of the field, such as medical emergencies. In 1978 two comprehensive American works were published for the first time: *Principles and Practice of Emergency Medicine,* edited by George R. Schwartz and published by W. B. Saunders Company, and the *MGH Textbook of Emergency Medicine.*

Wilkins' textbook of emergency care as practiced at the Massachusetts General Hospital is divided into five sections. Section one covers pathophysiologic principles of life support including cardiopulmonary resuscitation and shock. Sections two and three review medical and surgical emergencies by organ system. Section four illustrates certain areas of emergency ward management and nursing responsibility. Section five is an appendix of invasive techniques commonly used in emergency departments.

The *MGH Textbook* is truly comprehensive but it avoids the pitfalls of attempting to be an in-depth reference work for each of the specialties which together constitute emergency medicine. Rather, the book concentrates on diagnosis and management of patients in the initial phase of care. The text is compact, the volume is easy to hold and the index is complete, making this an ideal reference work for use on emergency wards.

Since patients often arrive at the emergency department with symptoms and signs rather than diagnoses, a major section of the book should have been devoted to differential diagnoses of several common presenting problems (such as dyspnea or coma). More space also should have been alloted to special problems sometimes encountered by emergency physicians, such as bites and stings, radiation injury and near drowning. Given the prevalence of patients with dermatologic problems in an emergency department, a more comprehensive chapter of common dermatoses should have been included.

Management skills are neglected in most medical schools and even in many emergency medicine residencies; emergency physicians, however, often are responsible for managing departments with large budgets and numerous personnel. Unfortunately the section on administration in this text merely describes emergency management as it exists at Massachusetts General Hospital and does not attempt to teach some of the necessary skills. Financial aspects of an emergency department are not considered. Costs associated with increasing use of the emergency ward contribute to the escalating cost of health care in this country and this text might have pioneered in this area by addressing the issues of cost effectiveness and cost control.

The *MGH Textbook of Emergency Medicine* is well written and clinically sound. In conjunction with other comprehensive reference texts in the specialities, it will serve as a useful addition to the libraries of emergency physicians and physicians in specialties where patients with acute illnesses are frequently encountered.

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RESPIRATORY FUNCTION OF THE LUNG AND ITS CONTROL—Fred S. Grodins, MD, PhD, Professor and Chairman, Department of Biomedical Engineering, and Professor of Physiology; and Stanley M. Yamashiro, PhD, Associate Professor of Biomedical Engineering, University of Southern California, Los Angeles—in the series: MODERN CONCEPTS IN MEDICAL PHYSIOLOGY—Lysle H. Peterson, MD, Consulting Editor. Macmillan Publishing Co., Inc., 866 Third Avenue, New York City (10022), 1978. 148 pages, $13.50 (cloth), $9.95 (paperback).

Grodins and Yamashiro have undertaken an awesome task in a relatively short text: to describe the components of respiratory function of the lung *and* their control using a systems analysis approach. The overall behavior of a complex system is examined (largely mathematically and with block diagrams) in terms of "interacting unit processes." An introductory chapter describes the lung as a metabolic servomechanism designed to match gas exchange rates in lung and periphery while maintaining internal chemical concentrations of arterial oxygen, carbon dioxide and hydrogen ion constant. After a chapter on gas laws the authors use subsequent chapters to describe six "unit processes" of pulmonary ventilation, pulmonary diffusion, blood chemical processing, circulation tissue diffusion and tissue metabolism, finally incorporating the concept of negative feedback as a major factor in controlling respiratory function.

The chapter on gas laws contains an error in one formula, describes body plethysmography in a single paragraph, and assumes an elementary knowledge of calculus. The problem set is helpful.

A chapter on the ventilatory apparatus describes lung volumes, flow rates, elastic and resistive properties (including Poiseiulles law and the Reynolds number),